

**WHAT IS CLAIMED IS:**

1        1. A method of operating a network node of a wireless telecommunication  
2        network, the method comprising:

1            selecting a first coding scheme for encoding of a point-to-multipoint (PTM)  
2        transmission carried to plural mobile stations on a common downlink channel;

3            monitoring information received on a common uplink channel for feedback  
4        regarding link quality of the point-to-multipoint transmission carried to the plural  
5        mobile stations on the common downlink channel;

6            using the feedback regarding link quality to determine whether to change from  
7        the first coding scheme to a second coding scheme for the encoding of the point-to-  
8        multipoint transmission to the plural mobile stations.

1        2. The method of claim 1, wherein the network node is a base station controller  
2        node.

1        3. The method of claim 1, wherein the feedback received on the common  
2        uplink channel from one of the plural mobile stations includes a signal indicative of a  
3        complaint regarding link quality, and wherein upon detecting the signal indicative of a  
4        complaint on the common uplink channel, choosing a more robust coding scheme as the  
5        second coding scheme.

1        4. The method of claim 1, further comprising changing the encoding from the  
2        first coding scheme to the second coding scheme when the feedback fails to provide  
3        any complaint regarding link quality with a predetermined time interval, the second  
4        coding scheme being a less robust coding scheme than the first coding scheme.

1        5. The method of claim 1, further comprising changing the encoding from the  
2        first coding scheme to the second coding scheme only when the feedback includes an  
3        indication that a sufficient number of the mobile stations are complaining regarding link  
4        quality.

1        6. The method of claim 5, wherein the monitoring further comprises:

2 forming a reporting group from a specified number of plural time slots received  
3 on the common uplink channel, one of the plural time slots of the group being randomly  
4 associated with a mobile station which complains regarding link quality;

5 obtaining an estimate of a number of the mobile stations that are complaining  
6 regarding link quality by ascertaining how many of the plural time slots in the reporting  
7 group include a signal indicative of a complaint;

8 comparing the estimate to a predetermined trigger value.

1 7. The method of claim 6, further comprising changing from the first coding  
2 scheme to the second coding scheme when the estimate equals or exceeds the  
3 predetermined trigger value, the second coding scheme being a more robust coding  
4 scheme than the first coding scheme.

1 8. The method of claim 1, wherein the common uplink channel is a random  
2 access channel.

1 9. The method of claim 8, wherein the random access channel is a PRACH  
2 channel.

1 10. A network node of a wireless telecommunication network, the node  
2 comprising:

1 an encoder which encodes a point-to-multipoint transmission carried to plural  
2 mobile stations on a common downlink channel;

3 a controller which monitors information received on a common uplink channel  
4 for feedback regarding link quality of the point-to-multipoint transmission carried to the  
5 plural mobile stations on the common downlink channel and which uses the feedback  
6 regarding link quality to determine whether to change from a first coding scheme to a  
7 second coding scheme for the encoding of the point-to-multipoint transmission to the  
8 plural mobile stations.

1 11. The apparatus of claim 10, wherein the network node is a base station  
2 controller node.

1 12. The apparatus of claim 10, wherein the feedback received on the common  
2 uplink channel from one of the plural mobile stations includes a signal indicative of a  
3 complaint regarding link quality, and wherein upon detecting the signal indicative of a

4 complaint on the common uplink channel, the control chooses a more robust coding  
5 scheme as the second coding scheme.

1           13. The apparatus of claim 10, wherein the controller changes the encoding  
2 from the first coding scheme to the second coding scheme when the feedback fails to  
3 provide any complaint regarding link quality with a predetermined time interval, the  
4 second coding scheme being a less robust coding scheme than the first coding scheme.

1           14. The apparatus of claim 10, wherein the controller changes the encoding  
2 from the first coding scheme to the second coding scheme only when the feedback  
3 includes an indication that a sufficient number of the mobile stations are complaining  
4 regarding link quality.

1           15. The apparatus of claim 14, wherein the controller:  
2           forms a reporting group from a specified number of plural time slots received on  
3 the common uplink channel, one of the plural time slots of the group being randomly  
4 associated with a mobile station which complains regarding link quality;  
5           obtains an estimate of a number of the mobile stations that are complaining  
6 regarding link quality by ascertaining how many of the plural time slots in the reporting  
7 group include a signal indicative of a complaint;  
8           compares the estimate to a predetermined trigger value.

1           16. The apparatus of claim 15, wherein the controller changes the encoding  
2 from the first coding scheme to the second coding scheme when the estimate equals or  
3 exceeds the predetermined trigger value, the second coding scheme being a more robust  
4 coding scheme than the first coding scheme.

1           17. The apparatus of claim 10, wherein the common uplink channel is a random  
2 access channel.

1           18. The apparatus of claim 17, wherein the random access channel is a PRACH  
2 channel.

1           19. A mobile station configured to operate in a wireless telecommunication  
2 network, the mobile station comprising:

1        a receiver which receives from a network node an encoded point-to-multipoint  
2 transmission carried on a common downlink channel;

3        a requestor which monitors link quality of the point-to-multipoint transmission  
4 and which causes provision of feedback regarding the link quality of the point-to-  
5 multipoint transmission on a common uplink channel to a network node.

1        20. The apparatus of claim 19, wherein the feedback provided on the common  
2 uplink channel includes a signal indicative of a complaint regarding link quality.

1        21. The apparatus of claim 19, wherein the feedback provided on the common  
2 uplink channel includes a signal indicative of a complaint regarding link quality in  
3 hopes that encoding of the point-to-multipoint transmission will change to a more  
4 robust coding scheme.

1        22. The apparatus of claim 19, wherein the feedback provided on the common  
2 uplink channel fails to provide any complaint regarding link quality.

3  
4        23. The apparatus of claim 19, wherein no signal is provided on the common  
5 uplink channel to indicate a lack of complaint regarding link quality in hopes that  
6 encoding of the point-to-multipoint transmission will remain the same or change to a  
7 less robust coding scheme.

1        24. The apparatus of claim 19, wherein the requestor determines in which time  
2 slot of a reporting group of time slots a complaint regarding link quality is to be  
3 provided as the feedback.

1        25. The apparatus of claim 19, wherein the requestor randomly determines in  
2 which time slot of a reporting group of time slots a complaint regarding link quality is  
3 to be provided as the feedback.

1        26. The apparatus of claim 19, wherein the common uplink channel is a random  
2 access channel.

1        27. The apparatus of claim 25, wherein the random access channel is a PRACH  
2 channel.

1        28. A mobile station configured to operate in a wireless telecommunication  
2 network, the mobile station comprising:

1            means for receiving from a network node an encoded point-to-multipoint  
2 transmission carried on a common downlink channel;

3            means for monitoring link quality of the point-to-multipoint transmission; and  
4            means for causing provision of feedback regarding the link quality of the point-

5 to-multipoint transmission on a common uplink channel to a network node.

1        29. The apparatus of claim 27, wherein the feedback provided on the common  
2 uplink channel includes a signal indicative of a complaint regarding link quality.

1        30. The apparatus of claim 27, wherein the feedback provided on the common  
2 uplink channel includes a signal indicative of a complaint regarding link quality in  
3 hopes that encoding of the point-to-multipoint transmission will change to a more  
4 robust coding scheme.

1        31. The apparatus of claim 27, wherein the feedback provided on the common  
2 uplink channel fails to provide any complaint regarding link quality.

1        32. The apparatus of claim 27, wherein the controller determines in which time  
2 slot of a reporting group of time slots a complaint regarding link quality is to be  
3 provided as the feedback.

1        33. The apparatus of claim 27, wherein the controller randomly determines in  
2 which time slot of a reporting group of time slots a complaint regarding link quality is  
3 to be provided as the feedback.

1        34. The apparatus of claim 27, wherein the common uplink channel is a random  
2 access channel.

1        35. The apparatus of claim 33, wherein the random access channel is a PRACH  
2 channel.